General Observations.

1872.

Middlesex County, Mass.

Jan. 18. An evident movement of winter birds from a little further south. For the past month birds have been scarcer than I ever knew them before. To day Spizella monticola, Parus atricapillus, and Cynaocitta cristata were seen in abundance.

Apr. A heavy migration of Hawks at Concord, Mass. Among them Buteo borealis, Accipiter fuscus, A. cooperi, Falco columbarius, Circus hudsonius.

1874.

Mar. 3. The ground is now bare in places and the weather warm I found two species of grasshoppers in the fields, one brown in color, the other uniform grass-green. The large blue-bodied blow-fly, was also out in sheltered places crawling about in a semi-torpid state.

May 11-13 Upon returning to Cambridge May 11, I found the country as bleak and bare as in April, none of the trees being green except a few of the lilacs, and grass only just starting; despite this backward condition of vegetation many of the summer birds were here in abundance, amog them: Orioles, Warblers, Vireos, and Yellow Warblers. I believe that these and mnay other late species migrate approximately on fixed dates without much reference to the vegetation. On May 13 the thermometer rose to 85°, and the general appearance of the country changed with marvelous rapidity, many of the trees which this morning were entirely bare being decidedly green by evening. None but the earliest, however, such as horse chestnuts and willows, have as yet started, and the woods are as bare and as dreary looking as in winter.

" 15. This season is certainly an unusual one Dendroeca coronata abundant, and Scolecophagus ferrugeneus numerous, while most of the summer birds such as Orioles, Bobolikns, Wilson's Thrushes, Yellow Warblers, etc. are abundant.

" 28. Walking quietly along the road through the Belmont Willows, my attention was attracted by a shrill squeaking, and looking closely I discovered a number of Shrews, chasing one another about the trukns of two huge willows, and occasionally up their stems to the height of six or eight feet, then returning to the ground where they appeared and disappeared in the numerous holes among the leaves with marvelous quickness and agility. Frequently as many as six or seven were in sight at once. I estimated the total number at about a dozen. Many of them were scarcely one quarter grown. I could not decide whether they were fighting or playing, but probably the latter.

July 21.

General observations.

1874.

Middlesex County, Mass.

(July 21) Spent the evening on the Assabet River, Concord. Nearly all the characteristic birds were singing at sunset In the dusk I saw numerous Swallows going to roost in the thick alders bordering the bank. Shortly after dark the new moon shed a dim light over the scene and nocturnal sounds succeeded diurnal ones. Bats were very numerous and their shrill squeaking were heard every where. Whippoorwills were singing in the distance. At one time many Cuckoos sang many times in succession, answering one another from the opposite shores.

Oct. 17. The autumnal coloring is probably at its perfection now, and the arches of the woods are everywhere perfect canopies of gold, russet, and crimson.

" 20. The leaves in the Maple Swamps are now all down and Pout Pond lately so beautiful looks as drear and forlorn as in November.

" 22. In the Trout Pond at "Fairyland" , Concord, I saw a water-beetle of the verylargest size clinging to the tops of some water grasses making a loud buzzing with its wings as it vainly tried to take flight. I think this species produces many of the ripples one sees on the surface of such ponds of a calm summer evening.

Nov. 14. In seconf growth oaks and birches in Belmont my setter pointed a bird which completely puzzled me. It rose within a yard of him, making a loud whirring and flew out of sight. It seemed to be of a dark slate color and looked as large as a Turkey.

1875.

Jan. 24. When frequent heavy snow storms prevail, all our winter birds even those whose food is of such a nature as to be in no danger of submergence, become most restless and active, showing evident anxiety in regard to their future subsistence.

Jan. 28. In former years I have thought that the abundance of cedar berries bore a close relation to the presence or absence of such of our winter birds as feed upon them; at the beginning of this winter, however, I noticed that the crop of these berries was a very scanty one, nevertheless Purple Finches and Pine Grosbeaks have wintered in unusual numbers while Robins have been exceptionally abundant for the past few weeks. Upon examining the cedar trees to-day I found that nine-tenths of them were completely stripped of their berries; it should be added that the past three weeks have been characterized by exceptionally severe weather. Granting that this extreme cold may have sent the Grosbeaks south it can hardly have brought the Robins north. Yet the latter were certainly absent in December and appeared early in January.

[illegible]

[illegible]

Oct. 11. [illegible]

" 20. [illegible]

" 26. [illegible]

Nov. 14. [illegible]

1870.

Jan. 22. [illegible]

Jan. 24. [illegible]

1875

General observations.

Middlesex County, Mass.

Feb.18) Since January 1 we have had only two mornings when the thermometer has risen above 10°; Long Island Sound and Massachusetts Bay are frozen ~~over~~ tight. Despite these conditions Robins, Purple Finches, and several other birds have been unusually numerous.

" 26. Star-nosed Mole. Shot one in a small pond caused by the overflow of a meadow. It was swimming near shore, and I at first took it for a mink. At length with some difficultyit crawled out on the ice which margined the shore. This happened near noon of a sunshiny day. Probably the Mole was drowned out from its hole by the sudden rose of the brook.

Mar. 30. The change from winter to spring has come with unusual suddenness. Up to within a week the thermometer fell nightly to zero and the snow was a foot deep. To-day the ground is two-thirds bare and Swallows, Blackbirds etc. are numerous, while all sorts of insects, chiefly ~~Coleoptera~~- Coleoptera and Diptera are moving about in sunny nooks. I saw the first stripped aquirrel out yesterday.

Apr! 2. I have never known the early spring birds arrive so early and in such numbers as this year. The fields are now nearly bare but the woods are buried in snow and the meadows still covered with thick but rotton, show-ice.

" 6. Antiopa Butterflies out in force for the first time, the hylas have not begun to peep yet.

" 15. A foot of snow fell yesterday, early this morning I witnessed the singular spectacle of numerous Swallows and Butterflies flying about over snow-covered fields, while Grass Finches and Pine Warblers were in full song.

" 26. Our common little yellow field butterfly was out for the first time to-day.

" 27. The late April birds are very late this year and very scarce too. I think the White-bellied Swallows were nearly all killed by the cold snapps last week.

Mag 6. Saw the first snake of the season to-day. Toads began singing the night of May 3d.

" 14. A few cherry blossoms out for the first time to-day although the woods are as leafless as in winter they are now swarming with birds.

" 20. All the smaller birds this season, Sparrows, Warblers and Thrushes indiscriminately, are excessively fat, owing I think, to the fact that the slow advance of the season prevents them migrating with their usual celerity.

General observations.

1875.

Middlesex County, Mass.

(May 20). Flying Squirrel. Started one from an old Downy Woodpecker's hole in the swamp on Everly Hill. Although I shook the tree violently I could not shake him off; the moment I stopped he whisked into the hole to come out at the first renewel of the shaking. Finally he sailed in a graceful curve to the next tree, a live maple, where I could not dislodge him, as he flattened himself against the bark and remained indifferent to the sticks with which I pelted him.

" 21. The cherry trees were fairly out yesterday for the first time.

" 24. The apple trees are in blossom, the oaks and walnuts in the woods green with young foliage; on the 22d they were as bare as in winter, although on that there was a heavy migration of the later Warblers.

" 25. The transition from spring to summer, from leafless woods full of migrating birds, to canopies of luxuriant foliage peopled with their characteristic summer species, has been unusually sudden this year. On May 22 the oaks and walnuts were entirely bare and indeed showed almost no traces of green. But in three days the change was accomplished and now the apple blossoms are beginning to fall. The rush of the later migrating species began the 17th, reached its height on the 22d, 23d, and 24th, and was almost entirely gone to-day.

June 10. Extended observations page 147 of Journal for 1875.

July 28. Nearly all the young birds are now out and many have put on their fall plumage. The adults still sing freely in rainy or cool, cloudy weather, and early in the morning.

Aug. 13. Birds are singing a little more now than they were several weeks ago.

" 24. The chorus of crickets is now at its height, while the cicadas are on the decline. Heard the first fall hyla to-day.

" 28. The Yellow-throated Vireo, Wood Pewee, and Baltimore Oriole, are now in full song and the only birds that one now hears in the woods. The smaller birds, especially Sparrows, are collecting into large flocks.

Sept. 7. The Maple Swamp is very lovely now, full of wild flowers and beautiful ferns, over which the lights and shadows glance through the dense foliage above.

Oct. 13. The leaves were killed ~~the the~~ e an early frost and have not attained their usual briliancy. Many of the trees are now nearly bare. Warblers have been very scarce this autumn.

[illegible]

[illegible] 7, [illegible].

[illegible] 20). Flying Squirrel. [illegible]

" 21. [illegible]

" 22. [illegible]

" [illegible]. [illegible]

[illegible] 1. Extended observations [illegible] for 1878.

[illegible] 22. [illegible]

[illegible] 18. [illegible]

" 24. [illegible]

" 25. [illegible]

[illegible] 7. [illegible]

[illegible] 10. [illegible]

General Observations.

1875.

Middlesex County, Mass.

(Nov. 3) A great rush of northern birds this morning. The weather up to within three days has been very mild. November 1, however, a sudden change took place and since then the thermometer has not reached above 35 , and snow in greater or less quantities is reported at various points in northers New England. The deciduous woods are now nearly bare but I was surprised to find many green things untouched by the frost under the shelter of evergreens. On the cedar ridge in Watertown, especially in its warmer nooks, many clumps of bushes and vines were as green as in September and the sensation upon entering them from the bleak hillsides behind was not unlike that of entering a green house in winter. At noon to-day the thermometer rose to about 40° and I found an abundance of insect life crawling about in sheltered places. Diptera were most numerous but I also heard the faint notes of a few grasshoppers and saw two or three of the common yellow field butterflies flying about. A curious sight was that of a pair of red-winged dragon flies hovering to-gether over a pool ~~eased~~ encased in ice.

Dec. 2. Hesperomys leucopus. In the Pine Swamp my setter started one from a bunch of grass; it scrambled hurriedly across a broad patch of smooth ice, and sought shelter in a hole on the other side. It was in brown pelage.

" 16. Rana pipiens. A number sitting along the muddy edge of Alewife Brook with all but their heads under water. They seemed as active as in summer. Several were of large size. This brook is kept open all winter by the sewerage matter discharged into it.

1876.

Feb. 15. The winter thus far has been remarkably mild and with the exception of three days fair sleighing the ground has been entirely bare most of the time. Birds of all kinds have been unusually scarce; the only irregular visitors from the north are Pine Grosbeaks and Red-Polls. None of the latter have been seen since November. Our regular winter residents have all been present in small numbers.

Mar. 7. Clear and exceedingly warm with south wind; thermometer 70°. The dry leaves in the woods were rustling every where with myriads of minute creatures crawling through them. Black little Coleoptera and shining Diptera of various colors and forms, all out basking in the warm sunshine. There was a sudden and unusually heavy rush of spring birds, Bluebirds and three species of Blackbirds appearing in unusual numbers. The sudden advent of a spring day, after the dreary, lifeless winter is no less a surprise than a delight, however much it may have been looked forward to. The air was full

General. Observations.

1876.

Middlesex County, Mass.

(Mar. 7). bird notes this morning Song Sparrows and Bluebirds taking a prominent part in the chorus. An unwonted activity was also apparent among the winter residents. Frazar who has been out every day of late tells me that he has seen no spring birds before this morning.

Apr. 3. Very abundant to-day in Watertown. They have begun to attack the asparagus berries but are still most partial to those of the red cedar. A flock covering the cone-shaped top of one of these trees makes a sungularly attractive picture. Some are always in the air, poising like Hummingbirds, in front of the clustering berries. When their appetite is satisfied they remove to the top of some tall deciduous tree in the neighborhood alighting in masses among the finer twigs. Here they are continually hopping from twig to twig or moving sideways along them apparently searching them for something and frequently picking off some small objects, but exactly what I cannot discover as the crops of several that I killed while thus employed contained nothing but berries. With these they frequently cram themselves to the very mouth. Only four of sixteen which I shot to-day had wax-spots.

May 23. Morning cloudy and very cold. Thermometer 43° at sunrise. In Lincoln I found the wood edges literally alive with small birds all silent, collected together in small flocks, searching for insects on or near the ground It was interesting to see Warblers, Flycatchers, Vireos, Grosbeaks, Tanagers etc. hopping about in company on the oak leaves with their feathers so ruffled up that they look like animated bunches of cotton wool.

Oaks, Maples, Hickories etc. are fast leafing out and the woods are already quite green.

Aug. 4. Few birds are sing now. The cicadas are in full blast and tree crickets began singing a week or two since but are not in full voice as yet.

" 27. I hear the faint list of Warblers passing overhead every night now, the crickets are still in full blast, but I have heard no cicadas within the last few days. The flight of Waders is said to have been very small this summer.

Oct. 4. The woods at Concord were very still to-day, not a breath of air stirring. From far and near could be heard the rustling of leaves and occasionally the light pat of a dropping acorn. The former noises were mainly produced by Chipmunks, which were out in great force. Waders and other small birds are exceedingly numerous, especially in birches.

Oct. 4. Parula. One (Concord).

" 10. " " One, the last (Concord).

General Observations.

1876.

Middlesex County, Mass.

(Oct.15) About two inches of damp snow fell this morning adhering closely to every twig and leaf. As the weather became colder through the day very little either shook or melted off. I drove from Cambridge to Concord this afternoon and shall never forget the beauty of the scenery. As I entered Lincoln woods the sun was setting casting a deep roseate glow over everything and the leaves in full perfection of their autumn covering were everywhere frosted with white.

" 17. The snow storm of day before yesterday has banished nearly all the small migratory birds.

" 24. At the Cliffs in Concord late this afternoon the air, cleared of all haze by recent rain, revealed distant objects with unusual distinctness, and just before sunset the wind died entirely away and the lively scene lay bathed in calm restful quiet. So still was it that the chuck of a chipmunk came distinctly to the an ear from the opposite side of the valley below and even the rustling of leaves stirred by his busy ramblings was distinctly audible. The voices of some men across the river, at least a mile distant, could be plainly heard, and even some of the woods distinguished, although they were talking in ordinary tones. Small Diptera flying over the river below, were visible at a distance of at least half a mile, but of course only where the slanting sunbeams lighted up their gauzy wings. Occasionally some small bird would cross the path of light and be distinctly seen for a moment becoming invisible as soon as it entered the shadow again, precisely as moths appear and disappear in the stream of light shed through a window of a summer evening.

Nov. 28. About two inches of damp snow fell during the night adhereing to every twig and blade of grass. A light wing started this morning and the trees began to wave gently to and fro their branches throwing delicate, flickering shadows, on the spotless surface beneath. As we forced out way through the thickets the snow shook down upon us in showerw loading our hat rims and sifting down our backs.

Dec. 31. The past month has been characterized by a great scarcity of birds, both of individuals and species. There have been absolutely no rregular winter visitors, and the regular species have been sparingly represented. Since December 9 the ground has been covered with snow an the weather severe; at this date the snow is over two feet deep.

1877.

May 16 On reching home from the South this morning, I find the season very backward. The past seventy days consecutively have been uniformly cloudy with chilly east wind; a single exception to this was May 13, a warm sunny day withthe thermometer reaching 80°, and the birds and vegetation advancing rapidly.

General Observations.

1877.

Middlesex County, Mass.

(Aug. 9) Warblers began migrating about the first of this month and every night since lisping chirp in the starlit sky above have been more freand more frequently heard.

1879.

May 8. The Willows are getting very beautiful, the grass on the meadows is springing up like magic, and cowslips, now in full bloom, sprinkles the waving green with its surface with its golden clusters.

" 10. Although vegetation advanced slowly early in the season, it has taken rapid strides within the past few days. The horse chestnuts are already dense with foliage, the maples, wild cherries, willows, lilacs, and birches draped in that exquisite tender green peculiar to the first stage of their incipient foliage. The buds on the oaks and hickories are swollen to large size and will open within a few days. The cherry trees came into full bloom this morning, and the pear trees will shortly follow.

" 12. A cloudless and exceedingly warm day with south wind, one of those rare days when theb air is filled with smoky haze and scented with the subtle fragrance of early flowers and growing things, when the trees burst almost simultaneously into leaf and one can almost mark the progress of vegetation from hour to hour.

" 13. A cloudless but very smoky sky, exceedingly hot for the seaon. Thermometer 85°. The temperature to northward is reported as even warmer than here, the thermometer at Bangor, Maine reaching 100° to-day. There must have been an extraordinary flight of birds last night for this morning the whole country was literally swarming with them, every thicket and woodland nook holding its score or more of tired little feathered travelers. The quoto of our summer residents is now more than full, being swelled by many individuals bound further north; the migrants, however, are easily recognized from resident birds; being found usually in flocks and in all sorts of places where their respective species do not breed.

" 14. Nearly as warm yesterday but with more breeze which partially removed the smoky haze. Birds fully as abundant as yesterday. Words fail to express the activity and abundance of bird life in the woods and meadows during this brief season; every thicket was literally swarming with birds nearly all in full song. The oaks and walnuts are now green with opening foliage, the tender leaflets of many of the former, of a delicate crimson tint almost like that of the maples in aurumn. The birches to-day cast a perceptible shade and their branches were thickly hung with slender pendant catkins. I think the dandelions first blossomed yesterday; they now sprin-

(May 14) kle every bit of green turf like drops of gold. The pear trees in the garden are in full bloom and the air is heavy with their fragrance night and day.

July 14. Concord River was very beautiful to-day in its wealth of luxuriant summer verdure. Its margin was every where studded with the pure snowy blossoms of the pond lily, and the Great Meadows was one vast sea of waving grasses. I cannot detect any migratory movement as yet among the smaller birds.

" 17. The Lincoln woods were very lovely to-day in their full sumeer foliage but they were nearly deserted of birds, only an occasional tanager being heard singing. The iridescent--winged deer flies were very numerous and troublesome.

Sept.27. The country was very beautiful and the road through the Willows really enchanting. The poison ivy which draped many of the trees there was tinged with gold and and various ~~shaedw~~- shades of crimsonand the light that straggled to the ground beneath softened as by the stained glass windows of some old cathedral, With the exception of the ivy, however, and an occasional maple, very few of the trees have changed color as yet. The air is filled with that subtle mellowness which seems to be felt rather than seen, the clustering scarlet pendants of the barberries by the roadside, the blue waxen berries of the cornell along the brooks, and the beautiful nightshade berries, give an agreeable touch of color to the dark hickories, while the golden rods and asters already brighten the wood opening and roadsides..

Oct. 10. On Fairhaven Bay this afternoon, a thin grey mist had settled over the basin. The surrounding hills were brought out in bold relief and looked much higher than common. The expanse of water was absolutely without a ripple and the moist air rendered distant sounds distinctly audible. We could hear a farmer whistling as he worked a mile away and the chirp of crickets came distictly to our ears from across the widest part of the Bay. A few frogs were croaking doubtfullt in the reeds, and an occasional distant shot was heard in the woods.

" 15. Although the woods are getting this and many a leafless tree makes a vacant space they are still very charming in the mellow sunshine of a hazy afternoon like that of to-day. The ground is now carpeted with fallen leaves. Most of the chestnuts have shed their foliage, the tupelows and red maples are bare, the birches fast thinning; nevertheles s I heard the trying shrill of an cicada to-day (Concord).

General Observations.

1879.

Middlesex County, Mass.

(Oct.16) A remarkably hot day for the season, the thermometer rising to 96°. The heat in the woods was suffocating, the scanty foliage affording but an imperfect shelter from the suns fierce rays. I heard several cicadas and this evening the autumnal crickets are in full chorus.

1880.

Oct. 9. For the past three days small birds, especially Warblers, have literally swarmed in the birches at Concord. The woods are now in the full glory of their autumn coloring; the black birches are especially fine, their foliage being of a perfect old-gold color.

" 11. The woods are extremely beautiful this morning; few of the leaves have fallen and the autumn coloring if slightly past its height is still very vivid. The Squirrels and Jays were abroad and filled the thickets with rustlings and with their characteristic cries (Concord).

" 25. The leaves are now for the most part down and the woods getting ready for winter. The oaks still hold their leaves, and in sheltered nooks arrow wood and blue berry bushes, are thickly foliaged and nearly as green as in summer; the birches retain enough leaves to yellow the distant hiddsides

" 29. The morning on Concord River was still and beautiful, wreaths of mist rising from the sluggish stream, Crows cawing in the distance, the shrill screams of the Blue Jay echoing along the painted hillside, the Tit La5ks whirling and piping over the brown meadows.

1881.

Sept.21. The Willows were very beautiful to-day, the quiet road fringed with golden rod and asters, the Viburnum ~~denaqum~~ dentatum and silky cornell hung with symes of Blue berries, the coral pendants of the Night-shade gleaming along the brook edges, and theb Black alder berries already turning. The dog wood is just beginning to change color.

" 20. Flying Squirrel. In the woods at Fairhaven Bay this afternoon I felt the wnd of something passing my ~~cheek~~head and a shadow glided across the path. I supposed it to be a bird till, looking up, I discovered a Flying Squirrel flattened against the trunk of an oak. We tried to make him fly again by rapping on the tree but he only shifted his position a little.

General Observations.

[illegible]

[illegible]

[illegible]

General Observations.

1881.

Middlesex County, Mass.

(Oct.21) A clear, absolutely calm day with heavy white frost in the morning, a warm mellow noon, and a peaceful, glowing sunset. The baloon spiders out in force on Concord River; we saw many spinning along on the water the silk baloon acting as a sail. Others were wafted across the river at a moderate height in the air; while some were a hundred feet or more above the earth, and drifted off over the woods, or passed only slightly below us as we sat on the cliffs.

1875.
July 30. The smaller birds are in large flocks now in the woods, just as in Maine. To-day I saw Sparrows, Warblers, Titmice, Woodpeckers etc., mingling together, often as many as a hundred individuals being collected into one great flock. Few birds were singing in the woods. I heard one Tanager and an Indigo Bird. Field Sparrows, however, were singing regularly. Few if any of the birds have left us as yet; except, possibly, the Swallows which seem to be getting scarcer.

General observations.

Maine (Lake Umbagog).

1871.
May 30-
June 10. The number of Ducks breeding here in season is very large. An exploring party which, early in June, went up Cambridge River to C Pond saw between one and two hundred of different species, many with broods of young.

1874.

July 28. The young birds are now in large flocks and their chirping fills the woods. The various species of Sparrows, Warblers etc., all seem to make precisely the same noise.

" 30. The chirpingof the different Warblers is positively indistinguishable, that of the young Kinglets is a trifle shriller.

Aug. 1. Few birds except White-throated Sparrows are singing now. I, however, heard a Winter Wren to-day in full song. The Lake continues very high, and as the meadows are flooded the usual waders are absent.

" 10. For several nights past I have heard the chirp of Warblers migrating overhead. No bird sings regularly now except the White-throated Sparrow, and he is fast lapsing into silence.

" 29. Found immense numbers of small birds along the Tyler Path. One mixed flock of Warblers, Titmice, and Vireos must have contained over one hundred individuals.

" 31. Most young birds are now in perfect fall plumage. The smaller species are almost exclusively in flocks which are rapidly thinning.

Sept. 4. The water is falling fast and the Herons and Waders are flocking to the recently exposed mud-flats.

" 5. The bulk of the Warblers have left.

" 9. The air last night seemed literally alive with migrating Warblers; they are getting scarce in the woods, although Black-polls and Yellow-rumps are still abundant.

" 13. The ferns have nearly all turned brown but otherwise the woods are nearly as green and luxuriant as in July. Wild flowers abound, the golden rod and several fine asters among them. I heard a Hyla piping by the Lake shore to-day in its usual spring tones, while the crackling fall notes of others filled the woods.

1876.

May 26. Reached Lake Umbagog Yesterday. The season is remarkably backward, lot a leaf having started as yet, while there is still a good deal of snow in the woods especially in hollows and cedar swamps. Even on Upton Hill there

1876.

Maine (Lake Umbagog).

(May 26) are drifts six feet deep in the open fields. Water froze this morning to the thickness of window glass. Despite these conditions nearly all the birds seem to have arrived. We saw to-day Dendroeca tigrina D.Maculosa, D.virens, D.blackburniae, D.coronata, Myiodioctes pusillus, and several others. They were in small flock and kept low down among the bushes; silent for the most part but one or two D.coerulescens and D.coronata were heard singing.

May 27. A decided change in the weather the day hot with west wind. Vegetation took a decided start and this evening at sunset I noticed that the birches were beginning to look green. There was an appreciable increase in the number of birds both in species and individuals, and nearly all sang freely. Tennessee Warblers and Scarlet Tanagers were seen for the first time.

" 28. A second warm day, vegetation advancing rapidly. This evening I noticed the moose wood (Virburnum lantanoides) and wild cherry in bloom for the first time, and also found some beautiful trilliums. There were a number of arrivals, among them D.striata, D.Pennsylvanica, D.blackburniae, Vireo olivaceus, Progne purpurea, Ampelis cedroum, and Antrostomas vociferous. Thrushes, both Olive-backs and Hermits, were singing everywhere at sunset.

" 29. Rained heavily last night. Forenoon cloudy and sultry, afternoon clear and cool. A marked increase in the number of birds and most of the species evidently settling themselves for the breeding season. Thus I notice that the Blackburnian Warblers have retired to the tree-tops and that each male keeps to his own domain and defends it against all invaders. The foliage of the birches has become quite dense. Arrivals were Vireo philadelphicus, Geothlypis philadelphia, Rhyacophilus solitarius, Ampelis cedrorum, (Gen.arr.) Hydemeles ludoviciana, Dendroeca castanea (Gen.arr), Empidonax flaviventris (Gen.arr); Contopus borealis (Gen.arr).

" 30. A sudden change in the weather, the night clear and almost frosty. Early in the morning the woods were perfect ly silent but as the sun rose higher and the day become warmer many birds began to be seen and heard. Most of the Warblers were collected in companies in warm, sunny nooks.

" 31. Clear and cold with north wind. Have not seen a Helminthophila of either species or a Dendroeca tigrina this week. The woods are now in full leaf and the plum trees in the garden shedding their blossoms. The "moose-wood" has also passed out of flower and the trilliums no longer beautify the woods. Warblers generally are now building their nests. Helminthophila peregrina and Dendroeca tigrina have apparently disappeared; at least we have heard none for several days.

General observations.

1876.

Maine (Lake Umbagog).

June 18. Birds sing now only early in the morning and again at sunset. The Winter Wren is not nearly as musicala as he was a week ago and the song of the Brown Creeper is heard much less frequently.

" 19. The mosquitoes now swarm in the woods, and the rank growth under foot of weeds and rasperbby bushes makes nest-hunting a laborious occupation.

" 24. At Bethel I met Professor Morse of Salem, who has been taking altitudes in and near Grafton Notch, the following are some of his determinations: Speckled Mountain 4,000 feet; Saddle-back Mountain 3700 feet; highest point of the road in the Notch 1250; Lake Umbagog 800 feet.

1879.

May 22. Reached the Lake this afternoon. Vegetation is unusually forward, owing to a warm spell about a week ago. The woods generally are green with unfolding leaves; the Moose-wood, Shad-bush, and Canada plum in full bloom; trilliums (both purple and white) and many other wild flowers in profusion. Most of the birds seem to be here.

" 24. Cloudy and rather cold. Most of the summer birds seem to be here but few of the species are numerously represented.

" 25. A warm day, damp, cloudy, with occasional gleams of sunshine and desultory showers. There was a well-marked bird-wave and the woods resounded all day with the songs of various species. At sunset the surface of the Lake was as smooth as glass and not a leaf stirred in the forest. A dense smoky haze obscured the distant mountains and even rendered nearer objects indistinct, while the sinking sun threw a lurid, glassy light over the scene. In the perfect stillness the evening songs of numberless birds came distinctly from the densely wooded shores. The serene melody of a Hermit Thrush singing at least half a mile away was perfectly audible, and the song of the White-throated Sparrows were continuous, one performer quickly succeeding another.

" 26. A cloudless day but a very wind one for May,, the air piercingly cold and a furious gale from the northwest, swaying the slender trees, roaring through the evergreen forests, and tearing up the surface of the Lake. The Warblers were in flocks all day, in sheltered places under the lee of the woods and on sunny hillsides. In one small fir I saw five male Blackburnians together, three on one branch their orange throats glowing like coals among the dark foliage. A few dejected Hummingbirds were sitting in the sun among dead twigs and fallen tree-tops and occasionally one would visit the plum orchard and battle with the winds for a sup of honey from

(May 26) the faded blossoms. The woods were nearly silent only a faint cheep being heard now and then.

" 27. Although the day was clear and rather warm Warblers were still in flocks keeping near the ground in sheltered places. In a single fallen tree-top I counted fifteen, among them three male Blackburnians, several Yellow-rumps, Canada Flycatchers, Black and Yellow Warblers etc.

" 28. Clear and warm, the bullfrogs about the Lake shores singing in chorus to-day for the first time. They are called the "Umbagog Band" by the country people.

June 6. The scenery about the upper part of the Lake, always refreshingly wild and beautiful, was unusually so late this afternoon. The rain had ceased and the sunlight streaming in places through rents in the clouds threw a strong light on the glistening verdure of the forest bordered shores. Wreaths of surling, cloud-like mist floated over the valleys enveloping the mountain summits whose outlines when unveiled stood out in unusually bold relief in the strong but shadowless light.

" 7. An extraordinary day for June, even in this region, a bitter cold wind whistling about the house and tearing the surface of the Lake into spray and frequent violent squalls accompanied by showers of little pellets, neither hail nor snow, but half way between the two and looking like homoepathic pills. This weather continuing through the day completely silenced the birds. The Warblers collected into large flocks in sheltered nooks, keeping close to the ground as upon their first arrival. At times not a single note, not even the faintest chirp, could be heard in the woods. I suspect that many sitting birds abandoned their nests. The nest of a Red start which I visitedthis morning presented a curious appearance; the bird was absent and the eggs were half burried in pellets of snow.

" 9. Drove through Dixville Notch to Colebrook. After passing Errol, the road for six or seven miles leads through a farming country. Bobolinks were numerous everywhere in the meadows and Traill's Flycatchers in the thickets and willows along the stream. Following up the valley of Clear Stream we at length entered a long stretch of woods where the road begins to ascend rapidly. About three miles east of the Notch I noticed a slight change in the bird fauna caused by the different relative abundance of several species as compared with the Lake region, the total absence of one (D.blackburniae), and the excessive abundance of another (D.striata) which never breeds at Upton. The woods were similar to those at Umbagog, but firs were more abundant and of larger size. The country between Dixville Notch and Colebrook is similar in character to that between Errol and the mountains.

General observations.

1879.

Maine (Lake Umbagog).

June 12. Vegetation advances very slowly. Lilacs still in bloom and on the 9th I saw a few apple blossoms, nevertheless weeds and various annual plants are growing fast and choking the fields and forest verdure.

" 24. Leaving the Lake House at 5 A.M. a heavy fog enveloped everything, chilling us to the very bone and casting an indescribable gloom over the scene. In the sombre evergreen vegetation bordering the Lake a few Swainson's Thrushes were singing and the ringing notes of the White-throated Sparrow came at intervals from the roadside thickets as we ascended the hill. Nearing its top we gradually emerged from the fog and on the extreme summit found the sun shining brightly and the sky perfectly clear. Looking back over the Lake, the eye rested on a vast sea of billowy fog that concealed everything beneath and beyond, its upper border beautifully tinted with rose and salmon by the sunlight which, however, failed to penetrate the denser masses below. The remainder of the drive to Bethel was delightful. In places where the mountains still throw their protecting shadows over the ground the grass was frosted with beadlike dew-drops, and the leaves in the forest fresh and wet with moisture. The mountain maple was in full bloom everywhere but the roadside.

On reaching Massachusetts late in the afternoon, I found the farmers everywhere at work in the hay fields many of which had been already mown, a striking contrast with the condition of the season at the Lake, where Haying never begins before July.

1880.

May 15. Bethel-Upton. The vegetation backward; along the stream the leaves faintly green with swelling buds and small leaflets; the paper birches thickly hung with graceful catkins. The shad bush is the only shrub in blossom; its scattered white bells looking pale and forlorn amid their leafless surroundings. On the mountain sides bordering the Notch to a height of perhaps two hundred feet above the valley the poplars were veiled in tender green, the maples just beginning to unfold, giving the effect of salmon-tinted haze among the darker firs and spruces. Higher up the deciduous trees were absolutely bare and gray. The poplar is the earliest tree to leaf in this region, the ash the latest.

" 18. The woods and thickets nearly as bare as in winter; the shad bush the only shrub in bloom.

" " A large flock of birds in a sheltered swamp contained numbers of Dendroeca blackburniae, D.maculosa, D.castanea, D.pennsylvanica, D.virens; one each of Turdus swainsoni, T.fuscescens, Vireo solitarius, Parula americana, and a few Regulus calendula.

General observations.

1880.

Maine (Lake Umbagog).

(May 17). A cold day, with high wind. All the small birds in flocks in sheltered places.

" 19. The vegetation has hardly advanced at all since my arrival and few of the deciduous trees show any green. The Warblers are exclusively in flocks composed of various species, and averaging about twenty individuals.

" 23. A spring day with warm south wind and cloudless sky; the woods rapidly becoming green; the paper birches especially veiled in thin foliage; mosquitoes very numerous for the first time .

" 24. The rhodora is in full bloom on the Lake shore. Virburnum lantanoides and the painted trilium, were also in bloom to-day.

June 1. In the woods about the Outlet the mosquitoes and black flies were swarming; they rose from the ground in clouds covering our cloths, hands, and faces, and driving us nearly mad.

" 3. The woods are now in full leaf; the rhodora is going out of flower; the red-stemmed cornel just coming in, the flower buds of Viburnum nudum swelling fast.

" 8. The painted triliums are still in bloom, while the woods in places are beautiful with clusters of ladies slippers. The red-stemmed cornell, choke-sherry, wild black~~berry~~ cherry, silky cornell, and several other shrubs are also in bloomsom. The rhodora is nearly out of bloom.

" 10. A dense curtain of fog hanging over the Lake up to about 10 o'clock,. Small islands, stumps, and other objects along the shores, presented strange weird shapes, and a spell seemed cast over all nature. The birds sang fitfully and their notes sounded unnaturally loud in the perfect stillness. At length the fog began to clear, drifting away and dissolving before a faint breath of air from the west, and the sun shone out on a superb panorama of glassy water, green forests, and sharply outlined mountains.

" 15. A retired Cove on the Lake this June morning presented an interesting scene of bird-life. On opposite shores, Wathr Thrushes were singing their, rich notes echoing through the arches of the woods; among the stubs a pair of Sphyrapicus were catching flies for their young which chattered loudly from their hole in the top of a tall paper birch. As I sat in my boat idly floating in shore, a Swamp Sparrow came hopping down a half-submerged log collecting insects for her young. Her tail was raised and she peared nervously from side to side and she passed within a yard of me. There was also a pair of Yellow-rumps, besides a host of birds just inside the wood edge.

General observations.

1880.

Maine (Lake Umbagog).

June 17. Found a fine young hop horn-beam near the Lake shore and identified Viburnum dentatum, V.opulus (now in bloom and very beautiful with its cymes edged with snowy sterile flowers); the nine-bark, here called hard-hack, and the Ledum latifolium. The latter grows in matted beds on rocky points just above high ater mark.

" 21. The reaches of this retired stream were very beautiful in the afternoon light; in places, where the banks were high and steep, graceful ferns hung over the water, while the quiet pools beneath were studded with the leaves and blossoms of both the large and small Yellow-water-lilies. The growth along the river bottom is chiefly black ash, elm, and the usual coniferae. Of the latter familt the white spruce was represented by numerous fine specimens. Alders fringed the stream whereever its margin was low and swampy, and the snowy blossoms of an occasional Virburnum opulus, stood out in strong relief against the wall of green foliage behind. The Balm of Gilead tree is found in a wild state about the Lake; and Alva Coolidge tells me that it occurs sparingly over the surrounding regiony often miles from any clearing.

Sept. 2. The foliage in the otch showing patches of bright coloring among the dark evergreen but at the Lake the woods are as yet unchanged. The larches are ragged and nearly bare, being infested by a small worm never seen here before.

" 3. Paddled down river this evening. Shortly after sunset Great Blue Herons began to arrive from the Upper Cambridge, circling majestically high in air, then sweeping down and alighting on the muddy shallows. Next a pair of Wilson's Snipe rose from the marsh andclimbed the rosy western sky until lost in the gloom above, whence their hoarse scaipe came back through the still air. Occasionally I heard the quack of some wandering Black Duck or the lisping whistle of a flock of belated Least Sandpipers, while the Great Herons hanked harshly as they joined their feeding comrades. From the distant woods the crackling voice of the hyla came almost incessantly. I also heard a White-throated and a Swamp Sparrow singing.

" 5. Paddling up the Cambridge River after dark this evening the whole air seemed alive with Waders, most of them Solitary Sandpipers and "Peeps", invisible in the darkness, but readily recognizable by their characteristic notes. We also heard two Snipe and saw several Ducks flying lakeward.

General observations.

1880.

Maine (Lake Umbagog).

Sept.13. In the woods the voice of the Blue Jay is now nearly as generally heard as in Massachusetts. The Crows are also very noisy now and seem to be perpetually engaged in mobbing some Hawk or Owl. Hawks, by the way, are exceptionally numerous this season. One of unusual size and peculiar markings, which I could not Identify, sat erect on the top of a stub by the river to-day.

" 15-14. A heavy north-east storm, threatening during the 14th, broke on the morning of the 15th, lasting all that day with rain falling in torrents. There was an extraordinary flight of waders both days, Blue-winged Teal appeared in numbers never seen here before, at least within the last ten years.

" 17. The poplars and birches about the Lake shores are fast turning yellow and an occasional red maple glows like a piller of flame against the back-ground of dark spruces.

Sept.18. The leaves are now turning fast and the woods show patches of brilliant coloring; yellow where there are poplars and birches, crimson where red maples abound .

1881.

May 11. The season at Bethel actually further advanced than at Portland, and nearly as forward as at Cambridge, Mass. The maples, poplars and willows green with opening leaves, and the apple-trees nearly in blossom. The fields everywhere, perfect green, the grass in favored places six inches high. Very little snow on the mountain tops and none in the vallows. Birds even in advance of the season; the elms along the village streets filled with migrating Warblers. I identified Troglodytes aedon, Dendroeca blackburniae , D. tigrina, D.coronata, Progne purpurea, Chaetura, Vireo gilvus, and Empidonax minimus. On the 12th in Bethel and within six miles to the northward, I saw Icterus baltimore, (numbers), Vireo olivaceous (two males singing), Harpor hyncus rufus (two males heard distinctly), Tyrannus carolinensis (several) ~~Hel-~~ Spizella pusilla (one singing), Helminthophila peregrina (one), Helminthophila ruficapillus, and several Dendroeca pennsylvanica, D.virens, and Setophaga ruticilla.

The vegetation was pretty uniformly advanced till we neared the Notch, when the trees became more and more bare and snow appeared on northern exposures; in the Notch the trees were all leafless and only the elms, maples and willows in blossom. Masses of ice hung from the ledges above and extensive snow drifts border the roadside. Only a few Hepaticas were in bloom in the opening. At Poplar Tavern I saw a Mimus carolinensis, near Brooks's just north of the Notch a pair of Totanus soliatrius, a Tyrannus carolinensis, and all the Swallows

1881.

Maine (Lake Umbagog).

(May 11). except Progne.

Reaching the Lake I found the vegetation but little ahead of that in the Notch, and only the mountain ashes and poplars showing any traces of green; nevertheless the most of the birds had arrived and were in full song. I heard dozens of Turdus swainsoni, numbers of Dendroeca blackburniae, D.coronata, D.virens, Parula americana, Siurus naevius, Setophaga ruticilla, Anorthura hiemalis, and Sphyrapicus varius, also one Dendroeca maculosa. Alva Coolidge tells me that the birds arrived in bulk yesterday; and that he heard Water Thrushes then. The thermometer to-day reached 80°

" 15. On the 2d of May, a little over a week before my arrival, there was good sleighing here and the snow covered the fields nearly to the fence rails; the following week was very warm and the snow and ice rapidly disappeared. The great rush of Warblers and other late migrants came the 10th and 11th Alva Coolidge tells me. Its seems remarkable that such birds as the Olive-sided Flycatcher, Nighthawk, and the Various Warblers should be here even now. Alva heard the first Woodcock sing about the 5th, and thinks they arrived then. Dana Brooks tells me that Richardson Lake opened on the 13th, but froze completely over again on the night of the 14th, a thing never known to happen before. I noticed yesterday that the poplars are leafing out but that all the other trees are as yet perfectly bare, although at a distance the hardwoods present a gauzy appearance due to their thickening buds and blossoms which tint their crests with delicate smoke-gray, salmon and other colors.

The result of the above conditions is that early breeding birds are late with their nests while the migrants, have followed up the warm wave closely, are usually early.

" 23. The hard-woods are now quite green everywhere. The moose wood is in blossom, the sugar pear at its fullest perfection of bloom. The floating island is snowy with the bells of the Cassandra, and both species of trilium are scattered in profusion beneath the forest trees. The canada plums are on the point of blossoming.

" 25. A few interesting changes in the bird fauna since last year I have seen only a single Dendroeca castanea and but one Hylotomus, Junco hiolalis is well nigh extinct; all the people are now commenting on this latter fact.

" 30. The floating islands in Bryant's Pond were purple with the blossoms of the Canada Rodora, which formed perfect masses of solid color.

General observations.

Porcupine; Grey Squirrel.

Maine (Lake Umbagog).

1875.
May 30. Porcupine. One stretched out on the branch of a low willow apparently sunning himself. I pelted him with stones and sticks, hitting once or twice when he would simply look down at me stupidly, moving his head slowly and evenly as if it were worked by machinery. I finally left him and returning several hours later found him still on the same branch.

1881.
May 28. A small Porcupine climbed a willow sapling, and crawling out on a branch, slowly drew the twigs towards him and devoured the leaves. Occasionally he would scratch the side of his head in a peculiarly leisurely manner. I walked directly under him and poked him with a stick which he struck vigorously with his tail with an upward motion; he did not, however, attempt to bite. There was another, an immense fellow grey with age, under the tree; he bristled up and snapped his teeth at me, then crawled under some bush.

1874.
Aug. 30. Grey Squirrel. Albert Ficket tells me that these Squirrels were very abundant about 1860, on the Megalloway River; a few were also seen at Errol. Before and since that year none have been reported.

GENERAL OBSERVATIONS ON THE MIGRATION OF WADERS.

Rye Beach, New Hampshire.

1871.

July 28. A heavy flight of Totanus flavipes, Macrorhamphus, and Tringa maculata, during a pouring rain. (North-easter)

Aug. 1. Most of Totanus flavipes are now young birds, whereas on July 28, only one juv. was seen among many adults. All the Macrorhamphus to date have been adults in breeding plumage.

" 4. Although the day was cloudy with a strong south-east wind--just the day apparently for a flight--only a few birds passed. Perhaps the wind was too strong.

" 6. A heavy flight of T.flavipes all day but few other species passing. Weather clear, wind south slightly shifting to south west in P.M.

" 7. A heavy flight of Totanus flavipes, Tringa maculata, T.minutilla and Aegialites semipalmata(also a few(Macrorhamphus) lasting all day but most marked between 5 and 8 A.M.-and 3 and 6 P.M. Weather clear with clouds gathering about the horizon. A strong south wind.

" 8.. A steady flight of Totanus flavipes all day and immense numbers of passing Tringa minutills, Ereunetes, and Aeg.semipalmata, up to 10 A.M. Morning cloudy with frequent showers and strong wind from the south-west. The weather cleared at 10 A.M. and the flight ceased at the same time, although the wind held all day.

" 10. An extraordinary flight of Tonatus flavipes beginning at 6 A.M. and ceasing abruptly and totally at noon. Large numbers of "Peeps" and Aeg.semipalmata, also, but of these not so many as o n former days. Weather clear and cold; thermometer 50° at sunrise. Wind strong from the north-west all the morning, veering to easterly shortly after the cessation of the flight.

" 16. Morning cloudy with light showers; wing south-west. At noon the wind veered to the south-east and the skies cleared. Shortly after this change a flight of Totanus flavipes began and lasted till after dark. In the morning only a few stragglers were seen but Tringa minutilla and Ereunetes flew steadily and in large numbers all day. Truly the connection between the weather and the flight of Waders is obscure. Yet there must be some connection for these flights are too well defined to be fortuitous.

" 17. Clear and warm with light south-west wind. A steady flight of Totanus flavipes and Actiturus bartramius all

" 20. Clear and cold the thermometer falling to 50°. A strong south-east wind sprang up early in the afternoon and with it began an extraordinary flight of Ereunetes-~~and~~ pusillus and Tringa minutilla. During the remainder of the afternoon they passed through the marsh in clouds,

General Observations on the Migration of Waders.

Rye Beach, New Hampshire.

1871.

(Aug.20) one flock close on the heels of the preceeding. Some flocks contained at least one hundred birds. No flight of other Waders and less than a dozen Totanus flavipes during the day.

" 21. Cloudy with rain from the south-west during the morning and strong chilly east wind in the afternoon. Again a very heavi flight of Ereunetes pusillus and Tringa minutilla, lasting through the forenoon. Only two Macrorhamphus and one Totanus flavipes passed.

" 22. Clear and warm strong east wind in the afternoon when there was another heavy flight of "Peeps" and a moderate one of Aegialites semipalmata, but no other birds worth mentioning.

" 25. Day broke cloudy and damp with a slight wind from the south-west. By 9 A.M. the sun came out and the day proved one of the hottest of the season, the wind being very light and at times dying away altogether. Despite these apparently unfavorable conditions the flight of Waders was, next to that of August 10, the largest of the season. It began at daybreak and lasted without intermission until dark. Totanus flavipes predominated among the large birds coming in small flocks and decoying unusually well. Macrorhamphus griseus also flew in great numbers, some flocks of fifteen or twenty being seen. There were a few Totanus melanoluca in nearly every flock of Totanus flavipes. Tringa maculata was also unusually abundant, flying, usually singly or in pairs, but in one instance eight were seen together. T.bonapartei was also comparatively numerous, at least a dozen being noted, and there was a steady flight of Actiturus bartramius, overhead as usual. Aegialites semiplamata and both "Peeps" also flew in great numbers. For the last three or four days they have flown almost unceasingly in extraordinary numbers, thousands often passing through the marsh in the course of a few hours. I killed in all just sixty large birds.

" 26. Cloudy with chill north-east wind and driving gusts of rain. "Peeps" flew in clouds all day, some of the flocks being larger than I ever saw before. The larger flocks contained many Aegialites semipalmata. No flight worth mentioning of larger species.

1872.

July 21. The "flight" has already begun; a few small flocks of T.minutilla passed through the marsh to-day. (Clear and warm).

" 22. "Peeps", all, I think T.minutilla, flew in good numbers to-day. I also saw three Macrorhamphus griseus Thomas Philbrick, a trustworthy gunner, tells me he saw several large flocks of this species July 20.(Rained hard all day; wind east to south-east).

General Observations on the Migration of Waders.

Rye Beach, New Hampshire.

1872.

(July 23). A large flock of "Peeps" and the first Totanus flavipes passed.

" 24. Two small flocks of Totanus Flavipes. (Cloudy; wind east all day).

" 25. Clear with west wind. Nothing flying.

" 26 Cloudy all day with pouring rain. Wind strong and south-east. About 2 P.M. a heavy flight began and lasted till dark. Macrorhamphus griseus flew in flocks of eight to ten, the intervals between the flocks averaging about ten minutes. Single birds sometimes passed in flocks of "Peeps" which flew in abundance with usually eight or ten Aegialites semipalmata in each flock. The Macrorhamphus came through the marsh against the wind, flying low down in an extended front and very rapidly. I saw only one Totanus flavipes and but one Strepsilas interpes. All the Macrorhamphus were adults.

" 27. Clear and fine; wind west. A few Macrorhamphus griseus passed at daylight. Last night about daylight I was awakened by the whistling clamor of what must have been an immense flock of these birds passing over the house.

" 28. No flight to-day.

" 29. No flight this morning. In the afternoon the wind changed from south-east to west with frequent thunder showers and a few T.flavipes passed

" 30. Clear and fine; no flight.

" 31. Cloudy; no flight.

Aug. 1. Clear and fine; no birds passing.

" 2. Clear, wind coming from the south-east in the afternoon. About 2 P.M. five or six flocks of T.flavipes and Macrorhamphus passed.

" 3. South-east storm all day with driving fog and rain. Several flocks of Macrorhamphus passed in quick succession about 9 A.M.

" 4. Clear with wind south east; no flight.

" 5. Clear with wind south east; no flight.

" 6. Clear and hot; wind south-east. A few flocks of T.flavipes and T.malanoleuca, and three flocks of Numenius hudsonicus.

" 7. Clear and hot with light south-east wind. A heavy flight of T.flavipes started in the afternoon and lasted till dark.

General Observations on the Migration of Birds.

Rye Beach, New Hampshire

1872.

(July 2nd) Large flock of "peeps" and the first Totanus flavipes seen.

" 3d. Two small flocks of Semipalmated Plovers. (Monday) Wind west all day.

" 4d. Clear with west wind. [illegible]

" 5th. Cloudy, all day with morning rain. Some [illegible] south-east. Above 2 P.M. a heavy fog [illegible] still west. Meadowlarks arriving. Saw in flocks of [illegible] fog, the individuals passing [illegible] south and [illegible] Flocks of "peeps" which they [illegible] Also in [illegible] Additional [illegible] in each flock. The Meadowlarks were numerous [illegible] Semipalmated Plovers flying [illegible] Frequent [illegible] very [illegible] Saw but one Stercorarius [illegible] All the Meadowlarks were adults.

" 7th. Clear and cool; wind west. A few Meadowlarks arriving [illegible] daylight. Fog about [illegible] was dissipated by the morning [illegible] of [illegible] been a transient flock of [illegible] passing over the [illegible]

" 8th. [illegible] to-day.

" 9th. No flight this morning. [illegible] afternoon [illegible] south-east [illegible] frequent [illegible] were [illegible] for Semipalmated [illegible]

" 30th. Clear and [illegible]

" 31st. Cloudy; no flight.

" 2d. Clear and [illegible]; no birds [illegible].

" [illegible] Cloudy and [illegible] south-east [illegible] morning. [illegible] 3 P.M. [illegible] Meadowlarks [illegible] flying [illegible] Meadowlarks [illegible]

" 4. South-east [illegible] all day [illegible] fog and rain. So [illegible] Meadowlarks [illegible] quite numerous [illegible]

" 4. Clear [illegible] south east; no [illegible].

" 5. Clear [illegible] wind [illegible]; no flight.

" 6. Clear [illegible]; wind south-west. A few [illegible] Semipalmated [illegible] Meadowlarks. [illegible] Meadowlarks [illegible]

" 7. Clear [illegible] with [illegible] south-east wind. A [illegible] flight of Semipalmated Plovers passed in the afternoon [illegible] still west.

General Observations on the Migration of Waders.

Rye Beach, New Hampshire.

1872.

(Aug.8) Very hot with light south wind. A heavy flight of large birds began at daylight, stopped at about 9 A.M., began again at 2 P.M. and lasted until dark. Three of us bagged sixty. This flight was one of the most regular that I ever saw it consisted almost entirely of T. flavipes and Tringa maculata the latter flying more numerously than I have ever seen them before. No flock of either species contained over twenty birds. Only three Macrorhamphus griseus, were seen.

" 9. Clear, with absolutely no wind, and the hottest day of the season. Thermometer 90° (Boston 100°). A heavy flight began at daylight and continued steadily all day slacking appreciably, however, in the afternoon. Carter and and I killed sixty-seven large birds. As on yesterday the flight consisted almost wholly of T.flavipes. And Tringa maculata, a few M.griseus, all young birds, were also shot, and several T.Melanoleuca and Numenius hudsonicus seen.

" 10. Clear with strong south-east wind; no flight.

" 11. Foggy with light south east wind. The heaviest ~~birds yet noted~~ flight of large birds yet noted passed today. It consisted chiefly of T.flavipes with a fair sprinkling of M.griseus and a few T.melanoleuca.

" 12. Cloudy with some fog; wind north-east. A few scattering birds, only, in the morning. In the afternoon a heavy flight of Macrorhamphus and a single N.longirostris.

" 13. Cloudy and misty; wind east. Only a few scattering birds.

" 14. Cloudy and foggy; wind east. In the afternoon a heavy flight of "Peeps".

" 15. Morning cloudy and misty, clearing at noon; afternoon with strong south-east wind; a thunder shower at 7 P.M. No birds worth mentioning in the morning but when the wind changed to the east (above 2 P.M.) a steady flight, chiefly T.flavipes, began and lasted till the shower broke.

" 16. Cloudy and foggy; thunder in P.M., preceding it a few flocks of T.flavipes passed.

" 17. Heavy rain all the morning; afternoon clear and warm. No flight.

" 18. Clear and warm. Did not see a single Wader all day.

" 19. Clear and warm; wind south-west. A heavy flight of Actiturus bartramius in the morning but nothing else all day.

General Observations on the Migration of Waders.

Rye Beach, New Hampshire.

1872.

(Aug.25) During the past week the weather has been, for the most part, fair. During this time there has been literally no flight whatever and only a very few straggling Waders have been seen.

" 26. Left Rye Beach to-day.

General observations.

1871.

Sept. 3. H.W.Henshaw observed a remarkable flight of Waders here to-day. Golden Plover, flew in large numbers and smaller Sandpipers and Plover in swarms. (Long Island, Boston Harbor).

1875.

Aug. 17. A heavy fl ight of the smaller waders on Long Island, Boston Harbor.

Sept.27. The view off Smith's Point was grand in the extreme. As far as the eye could the white foaming crests of huge surges were breaking marking the position o f the numerous sand bars. (Nantucket).

1876.

Apr. 13. At Point Lepreaux,N.B. sea fowl flew all day in clouds and water about was literally black with beds of them; Oe.americana and Old Squaws predominating. The day was clear, wind south changing to east at sundown.

" 14. At Point Lepreaux, N.B. last night about twenty birds were killed by flying against the light, and found dead on the ground beneath this morning. All were Song Sparrows with the exception of one Savanna Sparrow, and to two Juncos.

" " Cloudy with east wind and frequent showers of mist and rain; during the morning there was a heavy flight of Coots, chiefly Oe.americana, and sea fowl generally flew all day in a desultory manner. (Point Lepreaux,N.B B.).

" 15. Cloudy with occasional rain and a heavy fog. A heay heavy but intermittant flight of Sea-fowl all day, chiefly Coots. Among these Oe.americana was largely in excess of the other two species. Very few fowl alighted on the water and Thomas tells me that this is allways the case during a heavy flight. Severalspecies of small birds were migrating in numbers at mid-day, Robins, Song Sparrows, Fox Sparrows, and Juncos, appearing in small flocks every few minutes, coming in from the sea out of the mist and alightingon the rocks at the water's edge as soon as they reach the Point (Pt.Lepreaux,N.B.).

" 16. Morning clear, wind south-west. Afternoon cloudy with heavy rain in the evening accompanied by almost a gale from the South. In the forenoon only a few flocks of Coots flew, but during the afternoon they streamed passed the Point in incredible numbers (see observations under P.perspicillata). There was also a heavy flight of Brant over a thousand being seen. The Coots alighted freely on the water to-day, collecting into large beds. (Point Lepreaux,N.B.).

[illegible] observation.

1951.

[illegible] 3. [illegible] observed a remarkably [illegible] flight of [illegible] over [illegible]. [illegible] Lover, flew in from [illegible] and [illegible] lower [illegible] lower in a [illegible]. (Tom [illegible], [illegible] observer).

1952.

[illegible] 17. [illegible] flight of [illegible] smaller waders on [illegible] field, [illegible] observer.

[illegible] 27. The view off [illegible] point was spoiled by the [illegible] as [illegible] as [illegible] until the white foaming crests of [illegible] surges were [illegible] [illegible] operation. [illegible] [illegible] only sand [illegible]. ([illegible]).

1953.

[illegible] 12. [illegible] flew all day in [illegible] and water [illegible] flock with [illegible] of [illegible]; [illegible] and old [illegible] [illegible]. [illegible] day was clear, wind south [illegible] to east at [illegible].

" 14. [illegible] Point [illegible]. [illegible] Less [illegible] than [illegible] were killed by [illegible] [illegible] to lights, and found [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] were one [illegible] with the exception of one [illegible] [illegible], and [illegible] two [illegible].

" " Lovely [illegible] east wind and frequent showers of [illegible] and rain; during the morning there was a heavy flight of **boots**, a lighty [illegible], and see fowl [illegible] **flew all** day in a dense [illegible] manner. (Point [illegible], [illegible] [illegible].)

" 16. Cloudy with occasional rain [illegible]. [illegible] heavy but intermittent flight of **S**[illegible] all day, mostly **boots**. [illegible] case [illegible] was fairly in excess of [illegible] of or two species. [illegible] few fowl alighted on the water and [illegible] tells be [illegible] is always [illegible] [illegible] heavy flight. Several species of small birds were [illegible] in numbers at mid-day, [illegible], one sparrows, [illegible] [illegible], appearing in small flocks every few minutes, coming in [illegible] see out of the mist and alighting on the rocks at the water's edge as soon as they reach the Point (Pt. [illegible], . . .).

" 18. [illegible], wind south-west. Afternoon cloud with heavy rain in the evening accompanied by gales from the north. In the forenoon only a few **boots** of **boots** flew but during the afternoon they increased passed the point in incredible numbers (see observations under **C. Peculiarities**). There was also a heavy flight of [illegible] over a thousand [illegible] seen. The **boots** alighted freely on the water to-day, collecting into large beds. (Point [illegible], . . .).

General observations.

1876.

(Apr.17.) Clear; wind s outh. A steady flight of Coots and Brant all the forenoon, but during the afternoon only a few scattering birds. (Point Lepreaux,N.B.).

" 18. Clear and calm. Sea-fowl, chiefly Surf Ducks, began flying at sunrise and continued steadily passing until about 1 P.M. when they ceased abruptly; but late in the afternoon a few more large flocks went by. Their numbers, although almost incredible, were nea ly equalled by those of the Brant. (Point Lepreaux,N.B.).

" 19. Last night being dark and threatening we had a good opportunity to see the small birds come against the light. Sparrows of several species were continually flying about it like moths around a candle, and every now and then one would dash against the glass, and fluttering a moment, fall to the ground beneath. Others,more wary, kept passing in and out the lane of light but avoided close contact with the glass. I caug ht a Snow Bird easily as it fluttered against the glass. (Point Lepreaux, N.B.).

" " Alternately cloudy and clear; wind light and chage changeable. Sea fowl flew well from daylight till 9 A.M. when the flight stopped entirely. At least half of the numerous Coots that passed were Velvet Scoters, the remainder nearly all Surf Scoters. (Pt.Lepreaux, N.B.)